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NOTICE OF ALLOWANCE AND FEE(S) DUE

30596 7590 03/09/2010

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 8910
RESTON, VA 20195

EXAMINER

BERHANE, YOSIEF H

ART UNIT

PAPER NUMBER

2467

DATE MAILED: 03/09/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/568,702

02/17/2006

Kezhi Qiao

848600002US

4755

TITLE OF INVENTION: SIGNALING AGENT REALIZING METHOD BASED ON MEDIA GATEWAY CONTROL PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/09/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30596 7590 03/09/2010

HARNESS, DICKEY & PIERCE, P.L.C.
P.O.BOX 8910
RESTON, VA 20195

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/568,702 02/17/2006 Kezhi Qiao 848600002US 4755

TITLE OF INVENTION: SIGNALING AGENT REALIZING METHOD BASED ON MEDIA GATEWAY CONTROL PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/09/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
BERHANE, YOSIEF H	2467	370-401000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,702	02/17/2006	Kezhi Qiao	8486000002US	4755
30596	7590	03/09/2010	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195			BERHANE, YOSIEF H	
			ART UNIT	PAPER NUMBER
			2467	
DATE MAILED: 03/09/2010				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 515 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 515 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	10/568,702	QIAO ET AL.	
	Examiner	Art Unit	
	YOSIEF BERHANE	2467	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/22/2009.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>11/16/2009</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

/Hong Cho/
Primary Examiner, Art Unit 2467

DETAILED ACTION

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney David Cho on February 23, 2010.

The application has been amended as follows:

Claims:

1. The following amended Independent claims (see below) are Allowable: **1**
2. The dependent **claims 2-8** are allowable by virtue of depending from allowable independent claims.
3. Please Amend **Claims 1, 5 and 8** follows.

1. (Currently Amended) A method for realizing signaling agent based on a media gateway control protocol, comprising:

providing an agent equipment between media gateways and a media gateway controller that locate in different networks, the agent equipment providing signaling agent and network address translation between different networks; and

requesting to register the media gateway controller from a media gateway;
wherein:

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for a ~~MGCP/MEGACO~~ Media Gateway Control Protocol or Media Gateway Control (MGCP or MEGACO) signaling sent from the media gateway to the media gateway controller, if not related to media, directly replacing a transaction number by the agent equipment and then forwarding according to domain name in endpoint identifier; and if the ~~MGCP/MEGACO~~ MGCP or MEGACO signaling is related to media, processing a media attribute correspondingly by the agent equipment and then forwarding; and

if the ~~MGCP/MEGACO~~ MGCP or MEGACO signaling is related to media, creating or modifying a corresponding media forwarding port and a forwarding table on the agent equipment after receiving a signaling for establishing or modifying a connection sent to a media gateway from the media gateway controller, replacing relevant information on media in the signaling with information on corresponding network address of the media forwarding port on the agent equipment, and then forwarding the signaling to the media gateway; and

for a ~~MGCP/MEGACO~~ MGCP or MEGACO signaling sent from the media gateway controller to media gateway, sending the request message to corresponding media gateway by the agent equipment according to domain name in endpoint identifier.

2. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 1, wherein each of all media gateways under control of same media gateway controller has different domain name, each endpoint identifier includes domain name information of a media gateway, and the media gateway controller distinguishes media gateways according to their domain names in the endpoint identifiers.

3. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 1, wherein the step of requesting for registering to the media gateway controller from a media gateway further comprises:

sending a request message for registering to the media gateway controller from the media gateway, and recording message identifier of the media gateway received by the agent equipment to generate a piece of information about the media gateway;

assigning by the agent equipment a new transaction number to the request message for registering to replace original transaction number in the request message for registering;

recording the media gateway sending the request, and then forwarding the request message for registering to the media gateway controller;

registering the media gateway successfully, and then sending a response message for registering to the media gateway from the media gateway controller; and

determining the media gateway by the agent equipment according to the new transaction number in the response message for registering, replacing the new transaction number with the original transaction number, and then forwarding the response message for registering to corresponding media gateway.

4. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 1, wherein the step of replacing a transaction number by the agent equipment further comprises:

for each of request messages sent from the media gateway to the media gateway controller, assigning a new transaction number for a request message by the agent equipment, and recording the media gateway sending the request message;

after receiving on the agent equipment a response message for the request message sent by the media gateway controller, finding a corresponding media gateway according to a new transaction number assigned, replacing the new transaction number in the response message with original transaction number, and then forwarding the response message to the corresponding media gateway.

5. (Currently Amended) The method for realizing signaling agent based on a media gateway control protocol of claim 1, wherein the step of processing a ~~MGCP/MEGACO~~ the MGCP or MEGACO signaling that is related to media by the agent equipment further comprises:

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~~creating or modifying a corresponding media forwarding port and a forwarding table on the agent equipment after receiving a signaling for establishing or modifying a connection sent to a media gateway from the media gateway controller; replacing relevant information on media in the signaling with information on corresponding network address of the media forwarding port on the agent equipment, and then forwarding the signaling to the media gateway;~~

if the signaling is a signaling for creating a connection, further recording on the agent equipment an endpoint identifier of the connection,

modifying the forwarding table of a corresponding media forwarding port on the agent equipment according to a response signaling when the media gateway sends the media gateway controller the response signaling related to media;

replacing media information in the response signaling with information on network address of corresponding media port on the agent equipment, and then sending to the media gateway controller; and

sending a signaling for releasing the connection to the media gateway from the media gateway controller after calling finishes, releasing the corresponding media forwarding port on the agent equipment according to the endpoint identifier, and then forwarding the signaling to the media gateway.

6. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 2, wherein the step of requesting for registering to the media gateway controller from a media gateway further comprises:

sending a request message for registering to the media gateway controller from the media gateway, and recording message identifier of the media gateway received by the agent equipment to generate a piece of information about the media gateway;

assigning by the agent equipment a new transaction number to the request message for registering to replace original transaction number in the request message for registering,

recording the media gateway sending the request, and then forwarding the request message for registering to the media gateway controller;

registering the media gateway successfully, and then sending a response message for registering to the media gateway from the media gateway controller; and

determining the media gateway by the agent equipment according to the new transaction number in the response message for registering, replacing the new transaction number with the original transaction number, and then forwarding the response message for registering to corresponding media gateway.

7. (Previously Presented) The method for realizing signaling agent based on a media gateway control protocol of claim 2, wherein the step of replacing a transaction number by the agent equipment further comprises:

for each of request messages sent from the media gateway to the media gateway controller, assigning a new transaction number for a request message by the agent equipment, and recording the media gateway sending the request message;

after receiving on the agent equipment a response message for the request message sent by the media gateway controller, finding a corresponding media gateway according to a new transaction number assigned, replacing the new transaction number in the response message with original transaction number, and then forwarding the response message to the corresponding media gateway.

8. (Currently Amended) The method for realizing signaling agent based on a media gateway control protocol of claim 2, wherein the step of processing ~~a MGCP/MEGACO~~ the MGCP or MEGACO signaling that is related to media by the agent equipment further comprises:

~~creating or modifying a corresponding media forwarding port and a forwarding table on the agent equipment after receiving a signaling for establishing or modifying a connection sent to a media gateway from the media gateway controller; replacing relevant information on media in the signaling with information on corresponding network address of the media forwarding port on the agent equipment, and then forwarding the signaling to the media gateway;~~

if the signaling is a signal for creating a connection, further recording on the agent equipment an endpoint identifier of the connection,

modifying the forwarding table of a corresponding media forwarding port on the agent equipment according to a response signaling when the media gateway sends the media gateway controller the response signaling related to media;

replacing media information in the response signaling with information on network address of corresponding media port on the agent equipment, and then sending to the media gateway controller; and

sending a signaling for releasing the connection to the media gateway from the media gateway controller after calling finishes, releasing the corresponding media forwarding port on the agent equipment according to the endpoint identifier, and then forwarding the signaling to the media gateway.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yosief Berhane whose telephone number is (571) 270-7164. The examiner can normally be reached at 9:00-6:00 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached at (571) 272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/YOSIEF BERHANE/

Examiner, Art Unit 2467

/Hong Cho/

Primary Examiner, Art Unit 2467

